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1 1. A method of broadcasting television programming
2 including:
3 generating an analog video signal;
4 digitally encrypting an audio signal;
5 modulating a carrier with said digitally
6 encrypted audio signal and said analog video signal; and
7 broadcasting said audio and video signals.

1 2. The method of claim 1 wherein modulating a
2 carrier with said digitally encrypted audio signal includes
3 using orthogonal frequency division multiplexing to form
4 symbols.

1 3. The method of claim 2 including using an inverse
2 Fourier transform to convert a frequency domain signal back
3 to the time domain.

1 4. The method of claim 3 including providing a guard
2 interval with an orthogonal frequency division multiplexing
3 symbol.

1 5. The method of claim 4 including providing said
2 guard interval as a cyclic prefix.

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1 6. The method of claim 4 including setting the guard
2 interval to a time equal to the worst case multi-path
3 delay.

1 7. The method of claim 6 including setting the
2 multi-path delay time about 250 microseconds.

A22 1 8. The method of claim 7 including setting the guard
2 interval to less than about one quarter of the symbol
3 duration and setting the symbol time to about one
4 millisecond.

1 9. The method of claim 1 wherein modulating a
2 carrier includes using a conventional FM subcarrier and
3 modulating said carrier with said audio signal.

1 10. The method of claim 7 including synthesizing a
2 carrier to form a frequency modulated subcarrier.

1 11. The method of claim 1 wherein generating an
2 analog video signal includes generating an analog video
3 signal with a graphical overlay pattern.

1 12. A television transmitter comprising:
2 a graphics pattern generator that provides a
3 graphics pattern for an analog video signal;

4 an analog-to-digital converter coupled to receive
5 an analog audio signal;
6 a digital encryption stage coupled to said
7 converter; and
8 a modulator coupled to said stage.

A22 1 13. The transmitter of claim 12 wherein said
2 modulator uses orthogonal frequency division multiplexing.

1 14. The transmitter of claim 13 further including an
2 inverse Fourier transform unit coupled to said modulator.

1 15. The transmitter of claim 14 including a digital-
2 to-analog converter coupled to said unit.

1 16. The transmitter of claim 13 including a device
2 that overlays said graphics pattern on an analog video
3 signal.

1 17. The transmitter of claim 13 including a modulator
2 that modulates a carrier with said analog video signal with
3 said overlaid graphics pattern.

1 18. A television receiver comprising:
2 a video detector to separate a received
3 television signal into audio and video components;

4 a device to remove the graphics overlay from an
5 analog video signal;
6 a digital-to-analog converter coupled to said
7 audio signal;
8 a decryption stage coupled to said converter; and
9 a demodulator coupled to said stage.

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1 19. The receiver of claim 18 wherein said demodulator
2 demodulates using orthogonal frequency division
3 multiplexing.

1 20. The receiver of claim 18 further including a
2 Fourier transform unit coupled to said demodulator.

1 21. The receiver of claim 18 including an analog-to-
2 digital converter coupled to said unit.

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